HEFEI BLUES ELECTRIC TECHNOLOGY CO.,LTD

Supporting Facilities and Product Introduction in the Shipping Field

2025

BLUES IS BASED ON A SIMPLE PATTERN EASY TO PLAY BUT HARD TO FEEL

Application

Supporting applications for key projects

Basic information

In terms of ship weapons, it is mainly used in more than ten engineering models such as ships, aircraft carriers, submarine engines and underwater weapons.

It is equipped with 14 types of sensors such as pressure switch, high temperature speed, temperature, pressure difference signal, metal debris and liquid level, 90 product types and more than 5,000 sensors.

① Humidity sensor for ship cabins
② Angular displacement sensor
③ Humidity sensor
④ Metal chip annunciator
⑤ Pressure sensor
⑥ Dual platinum resistance thermometers
⑦ Thrust sensor
⑧ Temperature indicator
⑨ Pressure indicator
⑩ Flashing alarm

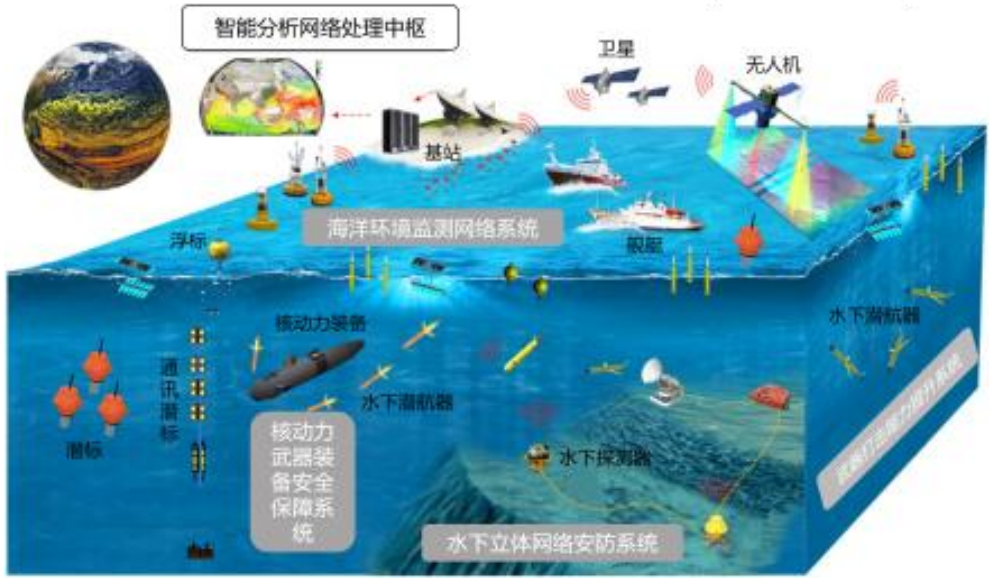
Application

Developing new areas and new qualities

Represented by underwater weapon sensors.

To meet the requirements of hydrodynamic characterization parameters testing for submarines and underwater weapons, the research focuses on multi-field integrated sensing test technology of surface pressure, temperature and strain of high dynamic and high density torpedoes.

Basic information



Deep sea exploration

Application

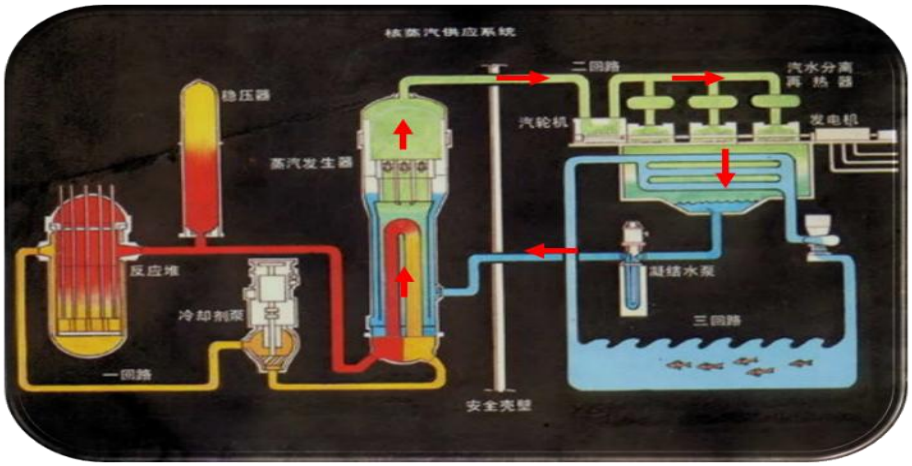
Developing new areas and new qualities

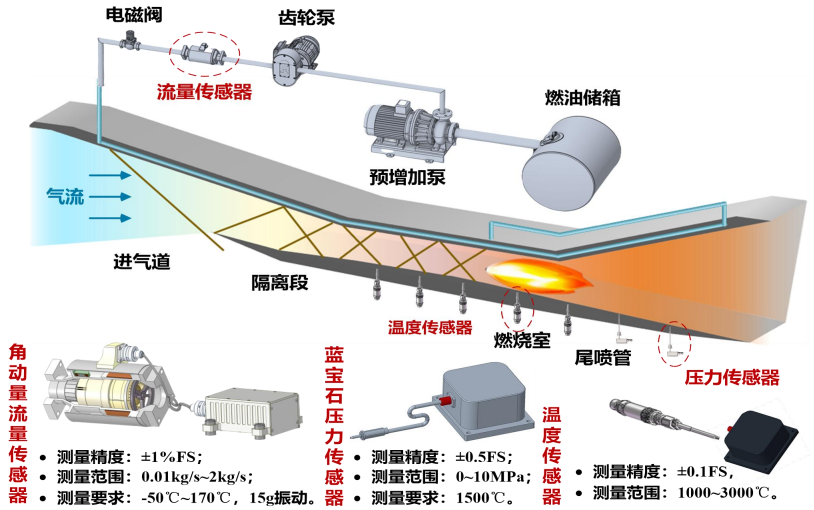
Represented by underwater equipment water quality sensor.

Facing extreme environments such as ultra-high temperature and nuclear radiation, new sensitive materials and multi-layer heterogeneous integrated packaging technologies are used to solve the monitoring of key parameters such as pressure, temperature and acceleration under ultra-high temperature strong vibration and complex harsh environment.

Extreme environment

Basic information





Application

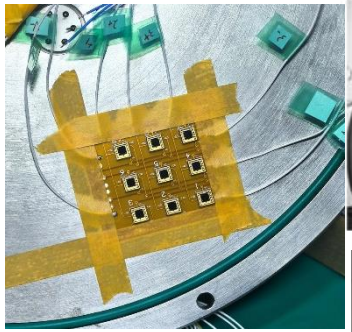
Developing new areas and new qualities

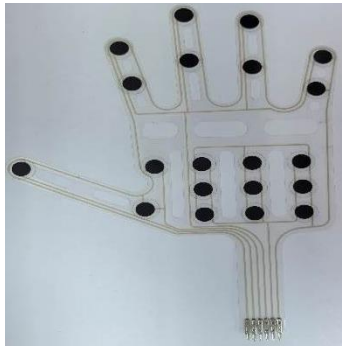
Represented by the sensor of the robots dexterous hand.

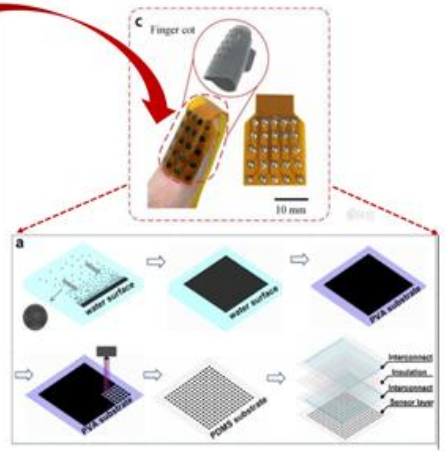
In view of the multi-mode, intelligent and high-precision sensing requirements of the robots end effector dexterous hand, the research focuses on bionic structure and material, multi-mode sensing and decision-making, flexible structure and drive, aiming to achieve high-precision operation and high-reliability task execution capability.

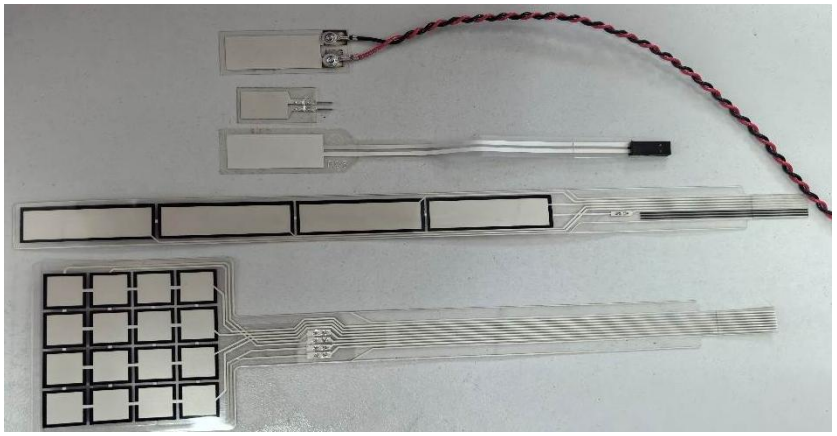
Intelligent unmanned

Basic information







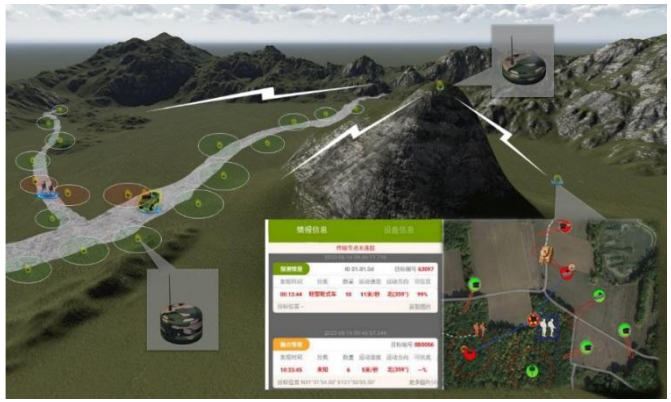


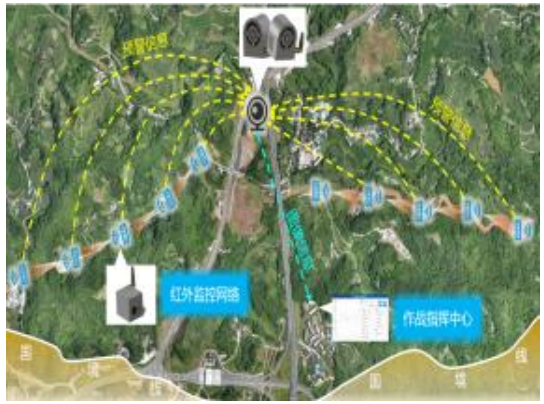
Application

Integration into the Internet and information system

Take the UAV fusion perception unit as an example

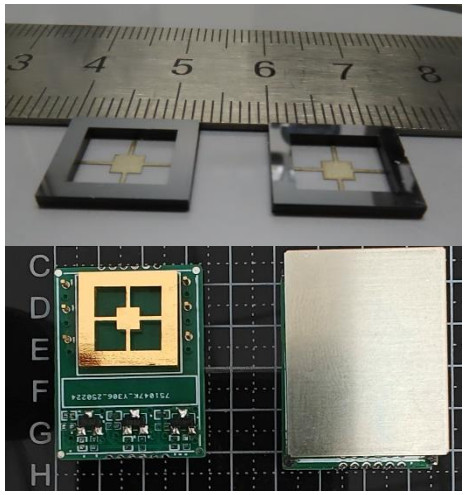
To meet the needs of low-altitude airspace supervision and UAV cluster security, the integrated technology of multi-dimensional sensing units such as attitude, position, magnetic vibration and sound is adopted to realize real-time networking and intelligent collaborative control in all areas, providing a technical base for the safe operation of low-altitude network.

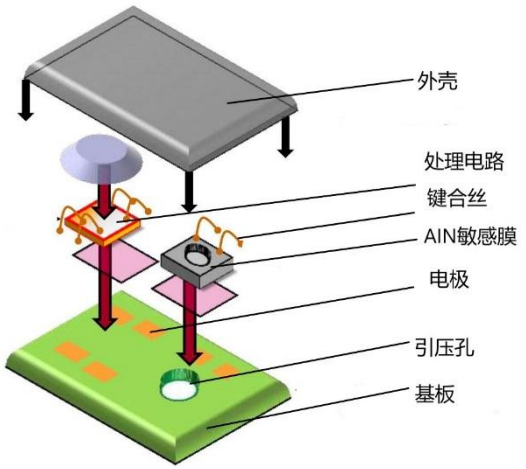




Basic information

Low-altitude economy





Application

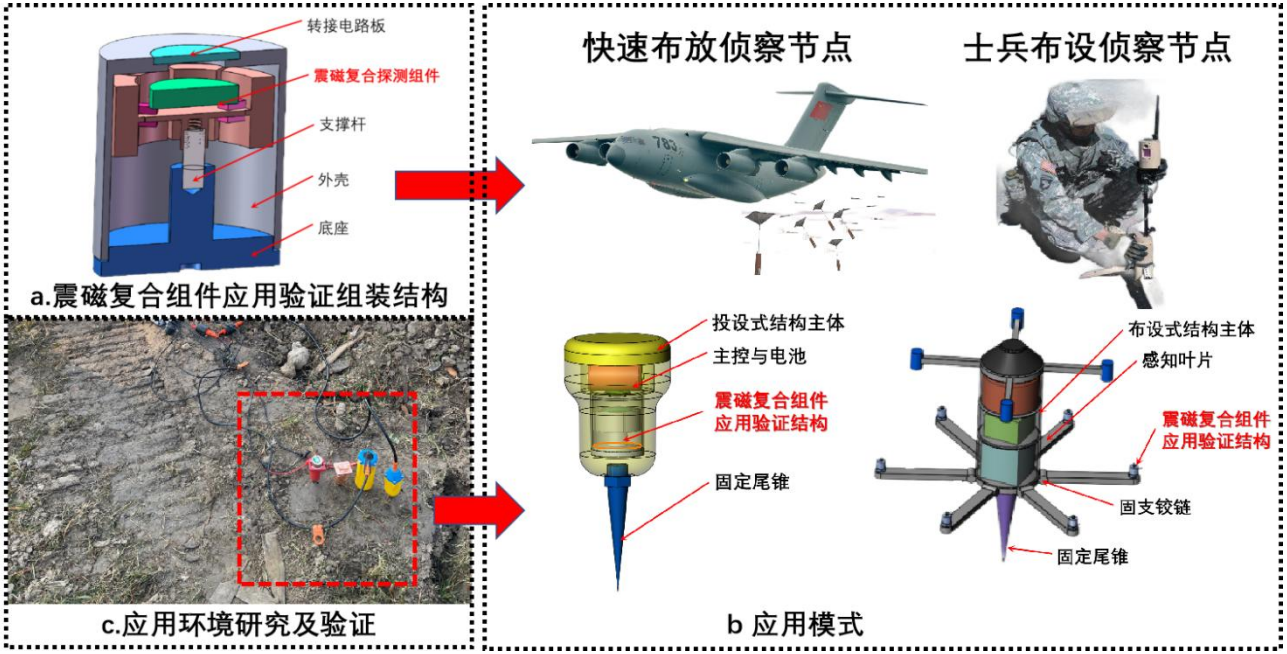
Integration into the Internet and information system

Represented by battlefield environment reconnaissance sensor network

To meet the security needs of battlefields, camps, cities and urban warfare, the simplified integration technology of magnetic, vibration, sound and inertial navigation units is adopted to realize the network communication and intelligent control and supervision network in all areas, laying a foundation for building a reliable network information security system.

Fortified security

Basic information



Application

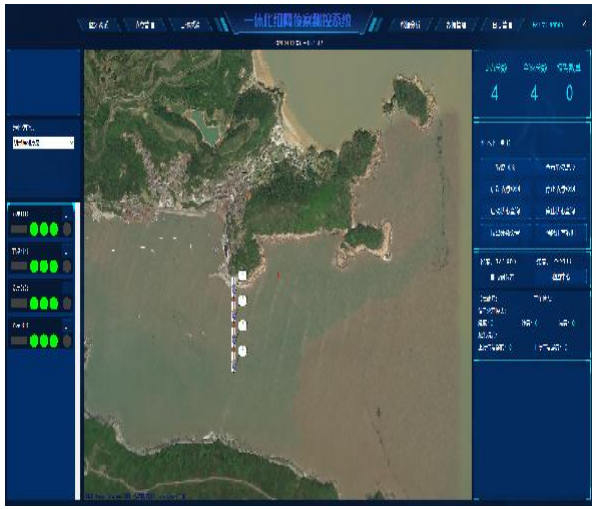
Integration into the Internet and information system

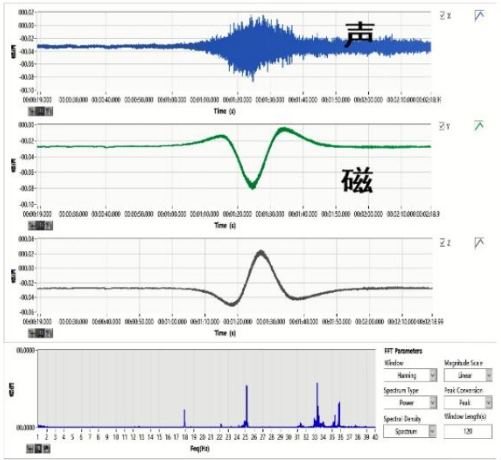
Rrepresented by the Marine control sensing device

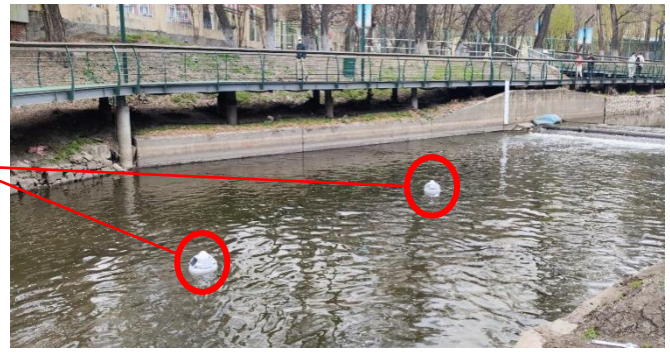
To meet the needs of precision control and perception in the entire coastal and offshore areas, we build a surface-underwater collaborative network communication and real-time monitoring network by relying on intelligent buoy carriers and integrating multi-dimensional signal sensing units such as surface attitude/environment and underwater sonar/temperature/salinity/deep, so as to provide key technical support for realizing intelligent monitoring of ocean security.

Smart Float

Basic information

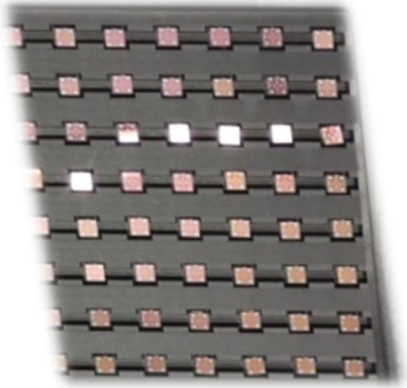






Typical product matching in the field of shipping

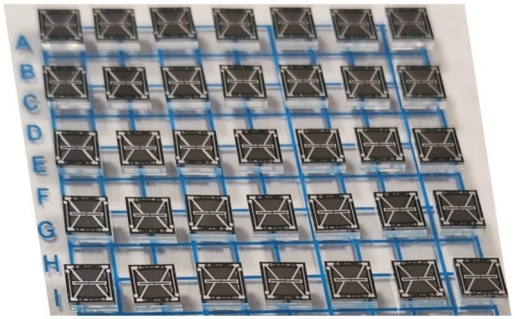
SOI pressure sensitive chip



core technology

- SOI high doping stress detection technology
- Various specific wet corrosion process technology
- High stability wafer bonding technology

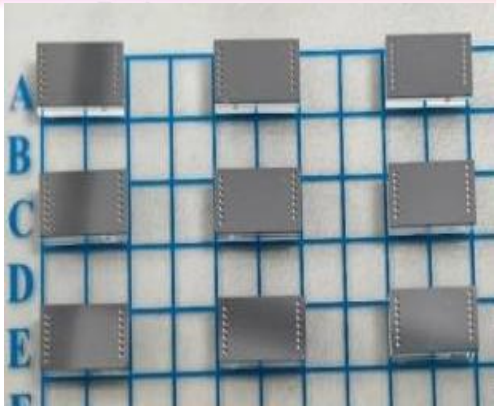
Monocrystalline silicon



core technology

- High linearity series structure design technology
- Temperature drift self-compensation process technology
- High stability wafer bonding technology

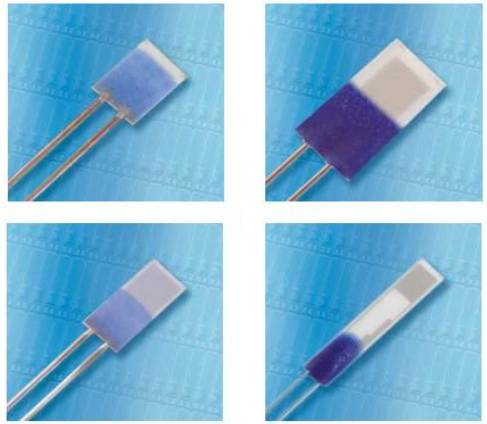
High precision resonant



core technology

- High depth ratio fine structure deep etching technology
- High quality factor wafer level vacuum packaging technology
- High stability stress compensation technology for resonant thin film

Platinum thermistor

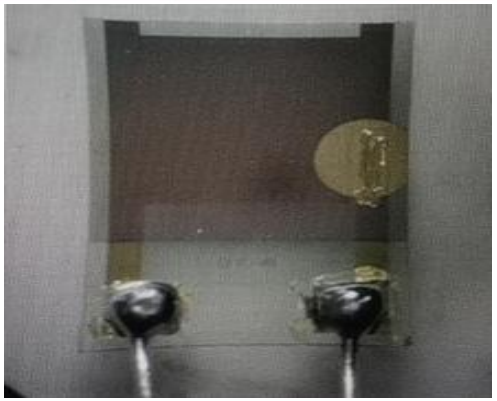


core technology

- High stability platinum film preparation technology
- Platinum film temperature coefficient control technology
- Wide temperature zone surface protection technology

Typical product matching in the field of shipping

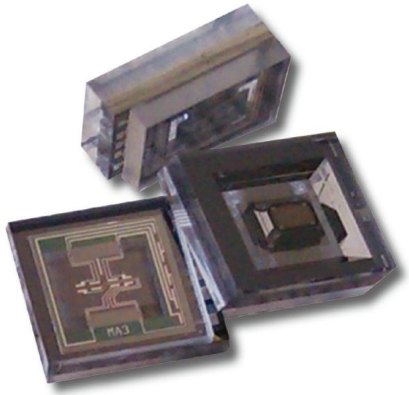
Polymer capacitive humidity chip



core technology

- Synthesis technology of polymer humidity sensitive materials
- Water permeable ultra-thin metal electrode technology
- Wafer online capacitance adjustment technology

Accelerometer sensitive chip



core technology

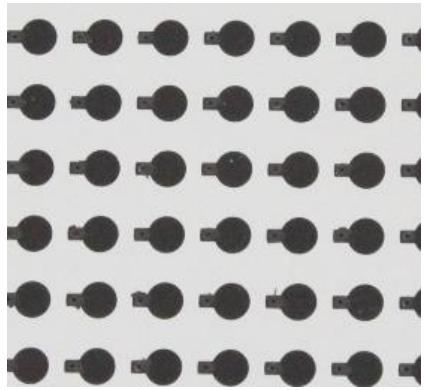
- Design technology of high overload inertial sensitive structure
- High depth width ratio silicon structure processing technology
- Wafer-level damping control technology

Hall chip

core technology

- Gallium arsenide based Hall chip manufacturing technology
- Hall effect control technology

Oxygen sensor chip



core technology

- High density ceramic casting film forming technology
- High temperature co-burning technology of multi-layer heterogeneous materials
- High stability heating electrode preparation technology

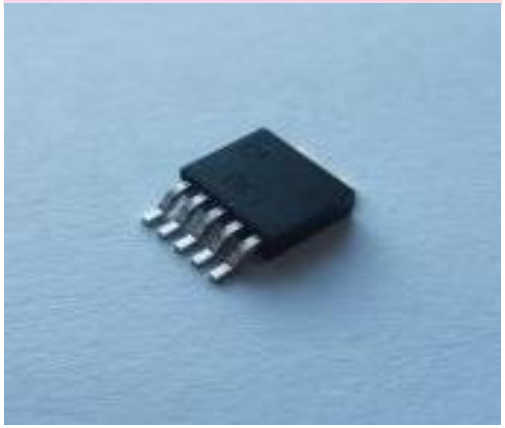
Typical product matching in the field of shipping

SOI pressure-sensitive core

core technology

- High reliability pressure core preparation technology
- High reliability oil medium packaging technology
- Bridge temperature error correction technology

acceleration transducer



core technology

- High sensitivity inertial sensitive structure design technology
- High depth width ratio structure processing technology
- Low stress packaging technology

Hall current sensor

core technology

- High performance magnetic sensitive core processing technology
- Magnetic balance current signal conditioning technology

Limiting current type oxygen

core technology

- High stability sensitive core preparation technology
- High temperature insulation packaging technology

Typical product matching in the field of shipping

High temperature speed

core technology

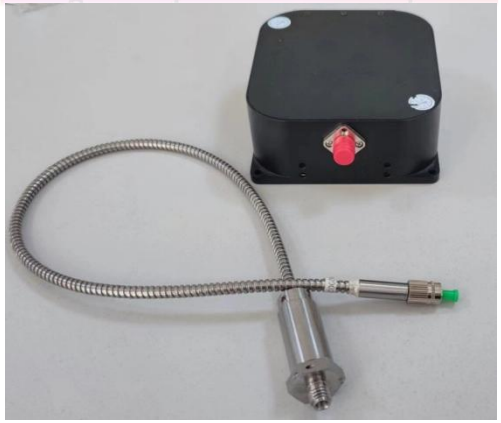
- Environmental adaptability and failure analysis techniques
- High temperature insulation technology
- High environmental adaptability and failure analysis technology

Piezoelectric accelerometer

core technology

- High sensitivity wide frequency response co-design

High temperature fiber optic



core technology

- Sensor high temperature packaging technology

Silicon resonant pressure

core technology

- High depth ratio fine structure deep etching technology
- Silicon-silicon wafer level vacuum bonding technology
- Weak signal detection technology

BES Series

Product overview

BES3001 type heat and vibration resistant pressure switch sensor

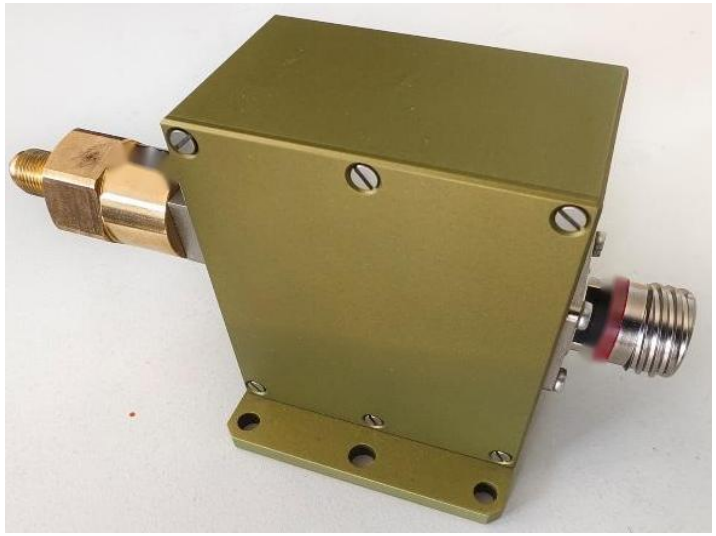
Key specifications

Movement pressure	(0 .2 ~ 10) kg/cm 2
Working pressure	(6 ~ 70) kg/cm 2
Static overload	(6 ~ 100) kg/cm 2
Action pressure error	(± 0.05 ~ ± 1.8) kg/cm 2
Excitation power supply	(27± 3) VDC
Load current	≤0.5A
Accuracy	0.5%
Insulation resistance	> 100MΩ/ 10 0VDC
Working temperature	- 30℃ ~ + 150℃
Application system	Fuel, lubricant systems

BES Series

Product overview

BES3002 depth sensor



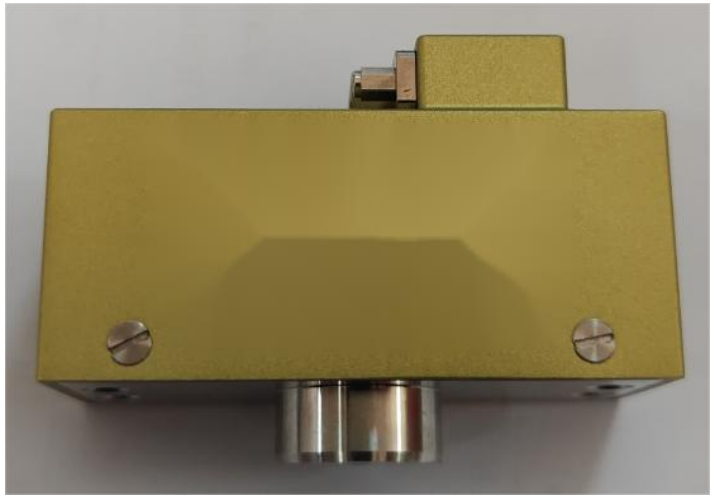
Key specifications

Measuring range	Table pressure (0 ~ 6.2) MPa
Accuracy	Full temperature zone error: (0 ~ 0.35) MPa range: error less than 0.005MPa (0.35 ~ 1) MPa range: error less than 0.030MPa (1 ~ 6.20) MPa range: error less than 0.080MPa
Weight	Not more than 500g
Supply voltage	DC 27V (can adapt to 18V ~ 36V)
Output	Digital CAN protocol output, baud rate 500 kbps
Working temperature	(-2 ~ +50) ℃
Applied engineering	Underwater pipeline

BES Series

Product overview

BES3003 pressure sensor



Key specifications

Measuring range	Tablet pressure (0 ~ 6.1) MPa
Accuracy	Full temperature zone error: (0 ~ 1.0) MPa range: error less than 0.010 MPa (1 ~ 6.1) MPa range: error less than 0.030 MPa
Geight	Not more than 200g
Supply voltage	DC 27V (can adapt to 18V ~ 36V)
Output	Digital CAN protocol output, baud rate 1M bps
Working temperature	(-18 ~ +65) ℃
Applied engineering	Underwater pipeline

BES Series

Product overview

BES3004 smoke sensor

Key specifications

Sensitivity	**0.5 ~ 1.0**
Insulation resistance	**≥ 20MΩ/50VDC (at room temperature)**
Working temperature	**-40℃~50℃**
Supply voltage	**(12± 1.2) VDC**
Output	**RS485 communication**
Power dissipation	**≤ 1W**
Applied engineering	**Cabin environment monitoring**

BES Series

Product overview

BES3005 oxygen sensor

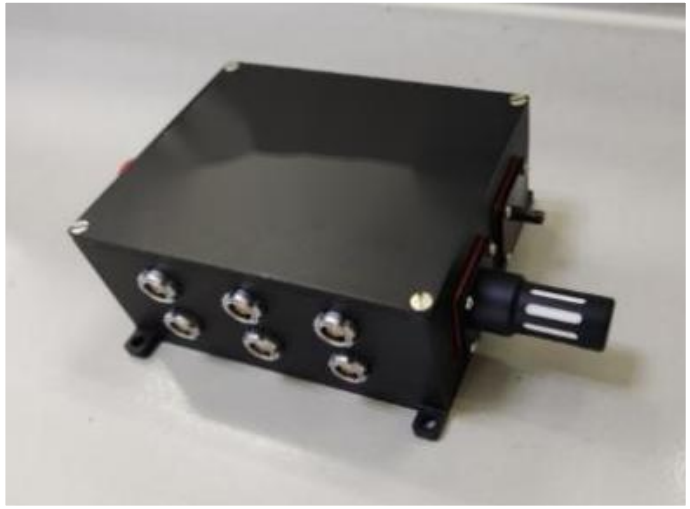
Key specifications

Measuring range	**10%~50%**
Accuracy	**±1%**
Weight	**≤60s**
Supply voltage	**(12±1.2) VDC**
Output	**RS485 communication**
Working temperature	**-40℃ ~ 50℃**
Applied engineering	**Cabin environment monitoring**

BES Series

Product overview

BES3006 temperature and humidity pressure sensor



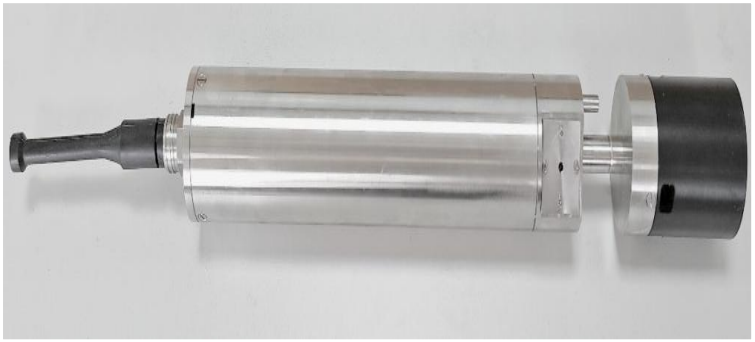
Key specifications

Measuring range	Temperature (-40~+70) ℃, humidity (0~100)%RH pressure (0~500) kPa
Excitation power supply	24VDC
Output form	RS485
Accuracy	Temperature: ±0.5℃, humidity: ±3% RH (@25℃), pressure: ±0.5%FS
Temperature measurement ch annel	Up to 6 lanes
Working temperature	transmitter operating temperature: (-40 ~ 70) ℃
Application system	Submersible cabin environment mo nitoring

BES Series

Product overview

BES3007 temperature and salt depth sensor



Key specifications

Temperature measurement range	-10～50℃
Temperature precision	±0.05℃（-5～35℃），±1℃（-10～-5℃，35～50℃）
Conductivity measurement range	0～70mS/cm
Conductivity accuracy	±0.05mS/cm
Pressure measurement range	0～3MPa
Pressure accuracy	± 0.25% full scale
application system	Underwater unmanned aerial vehicle

BES Series

Product overview

BES3008 pressure transmitter (standard, explosion-proof)

Standard

Explosion-proof

Key specifications

Measuring range	(0.0000 ~ 2.5000) MPa
Accuracy	± 0.1%FS (at room temperature)
Weight	Not more than 650g/1000g
Supply voltage	(9 ~ 36) VDC, rated value: 24VDC
Output	RS485 interface (MODBUS protocol), 5-digit digital tube on-site display, output (95 ~ 105) kPa under normal temperature and pressure (100kPa).
Working temperature	(-30 ~ +80) ℃
Applied engineering	XX mine test system
Explosion protection rating (explosion protection)	Ex db IIC T6 Gb

BES Series

Product overview

BES3009A level sensor

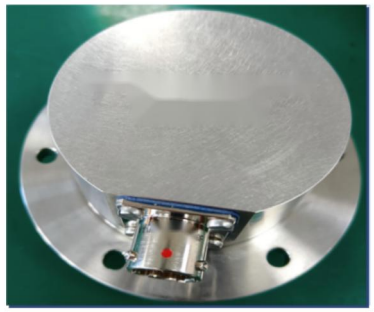
Key specifications

Measuring range	**Water: water level is higher than the datum (4±1) mm** **Sea water: water level above datum (6±1) mm**
Accuracy	**No water: output (4.0±0.5) mA;** **First stage: output (10.0±0.5) mA when the water level is higher than the datum (4±1) mm;** **The second stage outputs (15.0±0.5) mA when the water level is higher than the datum (6±1) mm.**
Weight	**Not more than 500g**
Supply voltage	**DC 28V (adapt to 20V ~ 32V)**
Output	**Current signal**
Working temperature	**(-10 ~ +50) ℃**
Applied engineering	**Internal launch device of XX submarine**

BES Series

Product overview

BES3010A environmental composite sensor



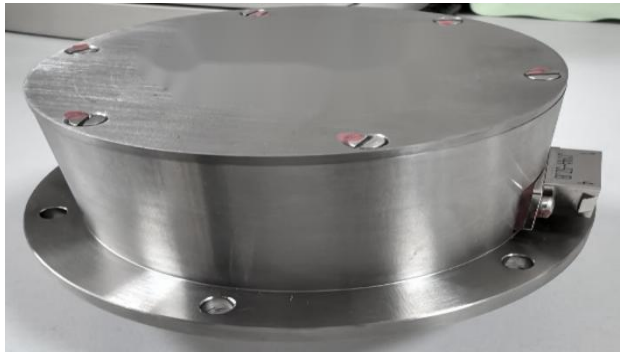
Key specifications

Measuring range	**Temperature: (-40 ~ +85) ℃; Pressure: (80 ~ 1200) kPa; Humidity: (10 ~ 90)%RH .**
Accuracy	**Temperature: ±1℃; Pressure: ±5kPa (at room temperature), ±10kPa (at high and low temperature); Humidity: (10℃ ~ 40 ℃), ±4%RH (tested at 20℃ temperature)**
Weight	**Not more than 1000g**
Supply voltage	**30×（1±15%） VDC**
Output	**RS422 signal**
Working temperature	**(-10～+50) ℃**
Applied engineering	**Internal launch device of XX submarine**

BES Series

Product overview

BES3011A water depth sensor



Key specifications

Measuring range	**0MPa ~ 1.5MPa**
Accuracy	**±0.3%FS**
Weight	**Not more than 500g**
Supply voltage	**(24±1)VDC**
Output	**RS-485 protocol**
Working temperature	**(-35 ~ 65) ℃**
Insulation resistance	**≥ 200MΩ/100VDC**

BES Series

Product overview

BES3012 proximity switch

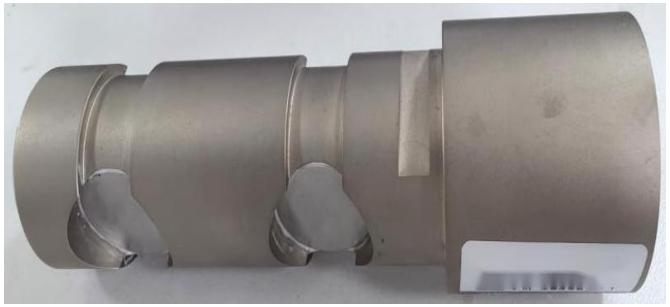
Key specifications

Measuring range	4-8mm，4-14mm
Trigger stroke	(4±0.5) mm
Weight	Not more than 150g
Supply voltage	12VDC
Output	NPN type normally open, high level:> Vin-2V; low level: <2V
Working temperature	(-30～65) ℃
Insulation resistance	≥ 10 0MΩ/50VDC

BES Series

Product overview

BES3013 tension sensor



Key specifications

Measuring range	**(0 ~ 2) t**
Supply voltage	**(18 ~ 32) VDC (nominal value 28VDC)**
Accuracy	**Not greater than ±1%FS**
Weight	**Not more than 4.5kg**
Output	**Current signals**
Working temperature	**(-55 ~ 71) ℃**
Insulation resistance	**≥ 20MΩ/50VDC**

BES Series

Product overview

BES3014 Water quality meter

EC

DO

PH Transducer

Secondary Instrument

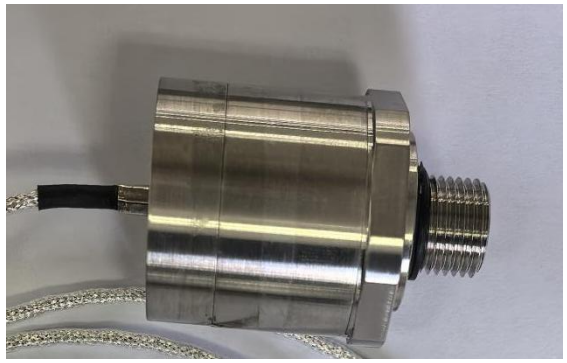
Key specifications

PH whole machine measurement error	≤±0.1pH
Conductivity whole machine measurement error	≤±1% range (range: 200μS/cm or 2000 μS/cm)
Dissolved oxygen whole machine measurement error	The larger value between ≤±10% reading and 10μg/L
Analog output error of analyzer	≤±0.05mA
Environmental character istics	Low/High temperature operation; low temperature storage; vibration; shock; mold; salt spray; electromagnetic compatibility (CE101, CE102, CE106, CS01.1, CS01.2, CS06, CS109, CS114, CS116, RE101, RE102, RS101, RS103)

BES Series

Product overview

BES3015 pressure sensor



Key specifications

Measuring range	(0～0.4) MPa、(0～250) M Pa
Excitation power supply	24VDC
Output form	(4～20) mA
Accuracy	0.5%
Insulation resistance	＞100MΩ/50VDC
Working temperature	-40℃～+125℃
Application system	Applied to ship diesel engine control system

BES Series

Product overview

BES3016 diesel engine K thermocouple temperature sensor

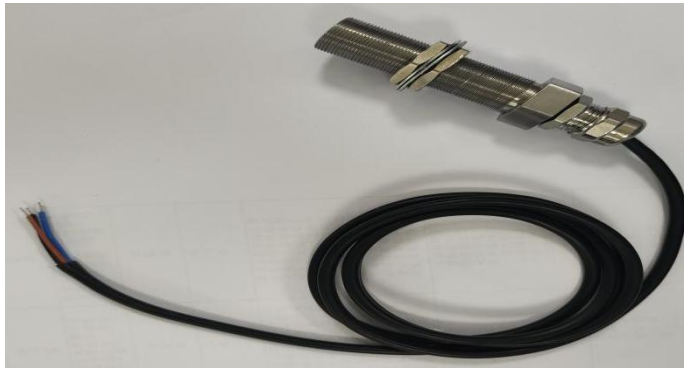
Key specifications

Measuring range	**40℃ ~ 1100℃**
Storage environment temperature	**-55℃ ~ 71℃**
Maximum temperature	**1100℃**
Accuracy	**± (0.4|t|) ℃**
Insulation resistance	**≥50M (100VDC) room temperature**
Application system	**Applied to ship diesel engine control system**
Measuring range	**40℃ ~ 1100℃**

BES Series

Product overview

BES3017 single/double output Hall speed sensor



Key specifications

Measuring range	**0-10kHz**
Excitation power supply	**24VDC**
Working current	**<30mA**
Accuracy	**0.5%**
Sensing distance	**0.4 ~ 1.5mm**
Working temperature	**-20 ~ 65℃**
Application system	**Applied to ship diesel engine control sy stem**

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Add: Room 409, Floor 4, Lakeside Valley Pioneer Park, No 1081 Jinzhai South Road, Hefei, Anhui,**PRC:230000**

BLUES IS BASED ON A SIMPLE PATTERN EASY TO PLAY BUT HARD TO FEEL